

A technique is provided to restore a target object such as a volume, directory or a pre-defined collection of files to a particular time by restoring the last full backup embodying the backup target, the last computed cumulative backup embodying the backup target and possibly the incremental backups after the last computed cumulative backup, if there are any that relate to change in the backup target. Restore operations in a bounded amount of time are accommodated by effectively managing the generation of full, incremental and cumulative backup files. Advantageously, the technique may be performed off-line for the analysis, collection and management of backup file subsets for different types of restore operations. Aspects of system restore operations are monitored and analyzed so that in response, off-line management and selection of efficient sets of backup files can be performed to correct inefficiencies that may be detected and to efficiently tailor restore operations to the system characteristics and patterns. If an application has a condition of bounded restore time, a set of cumulative backups may be efficiently tailored to meet the condition of bounded restore time.